Amendments to the Claims

1. *(Original)* A method for automatically equalizing an audio signal, the method comprising: measuring spectral energy values for a plurality of frequency bands; determining spreaded energy values for each frequency band based on the measured spectral energy values and a spreading function, the spreading function defining a spread of spectral energy across frequency bands; and updating equalizer settings for each frequency band based on the measured spectral energy values and the spreaded spectral energy values.

2. *(Original)* The method of claim 1, wherein the step of measuring comprises: measuring frequency components for at least a portion of the audio signal; and equalizing each frequency component using the equalizer setting associated with the corresponding frequency band.

3. *(Original)* The method of claim 2, further comprising prefiltering the measured frequency components with an inverse of an equal loudness curve prior to equalizing each frequency component.

4. *(Original)* The method of claim 1, wherein the step of updating comprises updating the equalizer settings based on a ratio of the measured spectral energy values and the spreaded spectral energy values.

5. *(Original)* The method of claim 1, further comprising using the updated equalizer settings to amplify corresponding frequency bands of the audio signal.

6. *(Original)* The method of claim 5, wherein the step of using comprises using a fraction of the updated equalizer settings in the decibel domain to amplifying the audio signal.

7. *(Original)* The method of claim 6, wherein a smaller fraction of the updated equalizer settings are used for low and high frequency bands than for midrange frequency bands.

8. *(Original)* The method of claim 1, wherein the method is performed in response to actuation of a button for controlling initiation of automatic equalization.

9. *(Original)* The method of claim1, wherein the method is performed in response to actuation of a knob for controlling equalization strength.

10. *(Currently Amended)* A system for automatically equalizing an audio signal, the system comprising: means ~~(120, 130, 140)~~ for measuring spectral energy values for a plurality of frequency bands; means ~~(150)~~ for determining spreaded energy values for each frequency band based on the measured spectral energy values and a spreading function, the spreading function defining a spread of spectral energy across frequency bands; and means ~~(160, 170)~~ for updating equalizer settings for each frequency band based on the measured spectral energy values and the spreaded spectral energy values.

11. *(Currently Amended)* The system of claim 10, wherein the means ~~(120, 130, 140)~~ for measuring comprises means ~~(120)~~ for measuring frequency components for at least a portion of the audio signal; and means ~~(130)~~ for equalizing the frequency components using the equalizer setting associated with the corresponding frequency band.

12. *(Currently Amended)* The system of claim 11, further comprising means ~~(120)~~ for prefiltering the measured frequency components with an inverse of an equal loudness curve prior to equalizing each frequency component.

13. *(Currently Amended)* The system of claim 10, wherein the means ~~(160, 170)~~ for updating comprises means ~~(160)~~ for determining the equalizer settings based on a ratio of the measured spectral energy values and the spreaded spectral energy values.

14. *(Currently Amended)* The system of claim 10, further comprising means ~~(180)~~ for using the updated equalizer settings to amplify corresponding frequency bands of the audio signal.

15. *(Currently Amended)* The system of claim 14, wherein the means ~~(180)~~ for using comprises means ~~(180)~~ for using a fraction of the updated equalizer settings in the decibel domain to amplify the audio signal.

16. *(Original)* The system of claim 15, wherein a smaller fraction of the updated equalizer settings are used for low and high frequency bands than for midrange frequency bands.

17. *(Original)* The system of claim 10, further comprising a button for initiating automatic equalization.

18. *(Original)* The system of claim 10, further comprising a knob for controlling equalization strength.

19. *(Original)* A method for automatically equalizing an audio signal, the method comprising: measuring spectral energy values for a plurality of frequency bands; comparing the measured energy values with a predetermined spectral energy distribution; and updating equalizer settings for each frequency band based on the comparison between the measured energy values and the predetermined spectral energy distribution.

20. *(Original)* The method of claim 19, wherein the step of measuring comprises: measuring frequency components for at least a portion of the audio signal; and equalizing each frequency component using the equalizer setting associated with the corresponding frequency band.